SUMMARY OF ISONIAZID (INH) FOR TREATMENT OF LATENT TB INFECTION (LTBI)

The following information is provided as a summary of current guidelines and should not be a substitute for review of current treatment recommendations including the following:

1) Guidelines for the Treatment of Latent Tuberculosis Infection: Recommendations from the National Tuberculosis Controllers Association and CDC, 2020
https://www.cdc.gov/mmwr/volumes/69/rr/pdfs/rr6901a1-H.pdf
2) Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection, 2000
http://www.cdc.gov/mmwr/PDF/rr/rr4906.pdf

- **INH (Isoniazid) Therapy:** The recommended regimen is INH daily for 6 months or 9 months. Twice weekly INH regimens are recommended to be supervised to ensure compliance.

Daily INH	Adults	5 mg/kg daily	*300 mg maximum dose*
	Children	10-15 mg/kg daily	*300 mg maximum dose*
Twice weekly INH	Adults	15 mg/kg twice weekly	*900 mg maximum dose*
	Children	20-30 mg/kg twice weekly	*900 mg maximum dose*

- **Medication Formulation:** INH is formulated into 100 mg and 300 mg tablets.

- **Pyridoxine (Vitamin B-6)**: To reduce the risk of INH-induced peripheral neuropathy, the use of Pyridoxine (Vitamin B-6) 25-50 mg is recommended for certain patients including the following: pregnancy, breast feeding, diabetes mellitus, HIV infection, poor diet, chronic kidney disease, history of neuropathy, history of seizures, malnourishment and substance and alcohol abuse.

- **Adverse reactions:** Rash, hepatitis, peripheral neuropathy, hypersensitivity reactions, optic neuritis, arthralgias, CNS changes, drug induced lupus, diarrhea, and drug interactions (i.e. Dilantin, Tegretol).

- **Clinical monitoring:** All patients receiving LTBI treatment should be seen in person by healthcare personnel at least monthly. Clinical monitoring is the most effective strategy for reducing drug toxicity and is an essential element in all LTBI treatment programs regardless of other monitoring efforts. Clinical evaluations during LTBI treatment should assess for the following: adverse drug reactions (especially hepatotoxicity), adherence to therapy, signs or symptoms concerning for active TB disease and the need for continued patient education.

- **Baseline laboratory evaluation:** Baseline laboratory testing is not routinely indicated for all patients at the start of INH treatment for LTBI. The following patients with an elevated risk of hepatotoxicity should receive baseline liver function tests (LFT's): pre-existing liver disease, history of alcohol abuse, HIV infection, concurrent treatment with other hepatotoxic medications, current or recent pregnancy (within 3 months of delivery) and individuals who were born in areas with high rates of viral hepatitis (e.g. countries in Asia and Africa). Testing should be considered on an individual basis.

- **Laboratory monitoring during treatment:** Routine laboratory monitoring is not necessary for most patients however serial LFT's (at least monthly) should be obtained in the following circumstances: history of liver disease, alcohol use or concomitant use of other potential hepatotoxic drugs, pregnancy and abnormal baseline LFT's. Therapeutic drug monitoring is recommended only for patients suspected of having malabsorption or treatment failure. Indications to stop LTBI treatment due to drug induced liver injury include transaminases ≥ 5 times normal in an asymptomatic patient, transaminases ≥ 3 times normal in a symptomatic patient or total bilirubin ≥ 2.

- **Completion criteria for INH therapy:** Completion of therapy is based on the total number of doses administered, not duration of therapy alone.

Daily INH	6 months	180 daily doses completed within 9 months
	9 months	270 daily doses completed within 12 months
Twice weekly INH	6 months	52 twice weekly doses completed within 9 months
	9 months	76 twice weekly doses completed within 12 months